

CLAIMS

- 1 . A gas laser oscillator comprising:
- a discharge part for exciting laser gas;
 - 5 an air blower for blowing the laser gas;
 - a laser gas flow pipe constituting a circulation route of laser gas between the discharge part and the air blower;
 - a driving part for driving the air blower;
 - a divide wall separating the air blower and the driving part;
 - 10 a gas supply apparatus having at least one valve, and supplying laser gas to the laser gas flow pipe;
 - a main ejection apparatus having at least one valve and ejecting laser gas out from the laser gas flow pipe;
 - a sub ejection apparatus ejecting the laser gas from the driving part of
 - 15 the air blower;
 - a detector for detecting an amount of the laser gas ejected from at least one of the main ejection apparatus and the sub ejection apparatus;
 - a controller controlling each valve of the gas supply apparatus and the main ejection apparatus, and the sub ejection apparatus; and
 - 20 a clogged laying pipe judge part judging the laying pipe of the sub ejection apparatus to be clogged when an ejected amount of the laser gas is smaller than a predetermined value,
 - wherein a signal from the detector is input to the controller; and
 - wherein the controller compares the ejected amount of the laser gas at a
 - 25 time the valve of the main ejection apparatus is closed, with a predetermined value.

2. The gas laser oscillator according to claim 1, further including an opening and closing cycle detector for detecting an opening and closing cycle of the valves of the gas supply apparatus,

5 wherein the clogged laying pipe judge part judging the laying pipe of the sub ejection pipe is clogged when the opening and closing cycle of the main ejection apparatus of which the valve is closed is longer than a predetermined value.

3. The gas laser oscillator further including an alarm part generating an alarm
10 when the clogged laying pipe judge part judges the laying pipe is clogged.